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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|-------------------------|------------------------|
| 10/820,947 | 04/08/2004 | Eric D. Brill | MS307421.1/MSFTP594US | 9717 |
| 27195 7590 08/28/2007 AMIN. TUROCY & CALVIN, LLP 24TH FLOOR, NATIONAL CITY CENTER 1900 EAST NINTH STREET CLEVELAND, OH 44114 | | | EXAMINER KIM, PAUL | |
| | | | ART UNIT 2161 | PAPER NUMBER |
| | | | MAIL DATE 08/28/2007 | DELIVERY MODE PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/820,947

Applicant(s)

BRILL ET AL.

Examiner

Paul Kim

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 July 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5-16 and 34-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-16 and 34-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

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DETAILED ACTION

1. This Office action is responsive to the following communication: Amendment filed on 16 July 2007.
2. Claims 1-3, 5-16, and 34-38 are pending and present for examination. Claims 1 and 37 are in independent form.

Response to Amendment

3. Claims 1, 2, 5, and 13 have been amended.
4. Claims 34-38 have been added.
5. Claims 4 and 17-33 have been cancelled.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. **Claims 1-3, 5-7, 11, 13, and 34-38** are rejected under 35 U.S.C. 102(b) as being anticipated by Knight et al (U.S. Patent No. 6,493,703, hereinafter referred to as KNIGHT), filed on 11 May 1999, and issued on 10 December 2002.

8. **As per independent claims 1 and 37**, KNIGHT teaches:

A system that ranks search results, comprising the following computer executable components stored in memory:

- a first component that determines relevance of respective search results associated with one or more of a Usenet, a discussion thread, a blog, an archived community discussion, or a chat room via one or more feature-based relevance functions wherein features of the function are based at least on one or more of global thread properties, one or more posting-specific thread properties, one or

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more attributes of a person posting messages or one or more newsgroups {See KNIGHT, C9:L60-65, information is broken down and sorted into a number of subject matter areas, which subject matter areas represent logical collections of content according to a (potentially different) set of service provider (or user) specific rules, filters, criteria, etc"; and C11:L32-56, wherein this reads over "in response to the user specified search parameters, a request is sent to community search robot"}; and

a second component that generates ordered search results based on their respective relevancies {See KNIGHT, C11:L53-60, wherein this reads over "a group of the same matching the user's query criteria are easily and rapidly located. These entries are then transmitted to the user's computer system, and presented in abbreviated listing format (i.e., author, date, excerpt from entry etc.) within a group listing area"}.

9. **As per dependent claim 2, KNIGHT teaches:**

The system of claim 1, the one or more global thread properties include at least one of:

a number of messages in a thread;

a thread depth;

a thread maximal branching factor;

a thread linguistic property;

a posting depth;

a number of descendents of a posting;

a number of children in a posting;

a number of postings per time duration;

a number of newsgroups posted;

a number of postings that have no responses;

the relevant functions utilize one or more newsgroups based on a probability that a posting is relevant given the posting is from a particular newsgroup, and

a probability a posting from a particular newsgroup is relevant given a query {See KNIGHT, C11:L53-60, wherein this reads over "a group of the same matching the user's query criteria are easily and rapidly located. These entries are then transmitted to the user's computer system, and presented in abbreviated listing format (i.e., author, date, excerpt from entry etc.) within a group listing area"}.

10. **As per dependent claim 3, KNIGHT teaches:**

The system of claim 1, the relevance functions are generated based on one or more of scoped lexical information, a digital artifact attribute, and a source repository attribute {See KNIGHT, C9:L60-65, information is broken down and sorted into a number of subject matter areas, which subject matter areas represent logical collections of content according to a (potentially different) set of service provider (or user) specific rules, filters, criteria, etc"}.

11. As per dependent claim 5, KNIGHT teaches:

The system of claim 1, the search results are further associated with searches over data associated with one or more of a mailing list, a wiky, a web page, a database {See KNIGHT, C15:L19-33, wherein this reads over "[t]his query is sent to community search robot 231 as noted above, so the user can query all the records in database 242 on server 220"}, or a list.

12. As per dependent claim 6, KNIGHT teaches:

The system of claim 1, further comprising a function generator that creates the relevance functions based on at least one of a training set, a feature set, a probability, an inference, a classifier, a heuristic, and user specified criteria {See KNIGHT, C9:L60-65, information is broken down and sorted into a number of subject matter areas, which subject matter areas represent logical collections of content according to a (potentially different) set of service provider (or user) specific rules, filters, criteria, etc"}.

13. As per dependent claim 7, KNIGHT teaches:

The system of claim 1, the relevant functions are refined based on a user's response to the ranked search results {See KNIGHT, C12:L23-28, wherein this reads over "[i]f a user responds with a reply posting to an original posting in a particular subject matter area, the present invention tags the reply posting with a parameter field specifying that the reply posting should also be classified in the same area as the original posting"}.

14. As per dependent claim 11, KNIGHT teaches:

The system of claim 1, the relevance functions are generated via machine learning {See KNIGHT, C12:L18-23, wherein this reads over "the present invention also intelligently classifies and stores message by subject matter area/class/subclass in advance based on understanding the context of the posting"}.

15. As per dependent claim 13, KNIGHT teaches:

The system of claim 1, the one or more feature-based relevance functions utilize a features that are obtained by extracting information from digital artifacts {See KNIGHT, C15:L19-33, wherein this reads over "[t]his query is sent to community search robot 231 as noted above, so the user can query all the records in database 242 on server 220"}.

16. As per dependent claim 34, KNIGHT teaches:

The system of claim 1, the one or more features based relevance functions utilize features that comprise an occurrence of one or more of a word, a word class or a phrase in a thread position relative to a posting {See KNIGHT, C12:L16-18, wherein this reads over "each posting is sorted and/or tagged with one or more additional parameter field(s) specifying one or more categories which such posting should fall under"}.

17. As per dependent claim 35, KNIGHT teaches:

The system of claim 1, the one or more features based relevance functions utilize one or more of text-based relevance scores for respective scoping or a comparison between the text-based relevance scores with different scopings {See KNIGHT, C12:L16-18, wherein

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this reads over "each posting is sorted and/or tagged with one or more additional parameter field(s) specifying one or more categories which such posting should fall under").

18. **As per dependent claim 36**, KNIGHT teaches:

The system of claim 1, the one or more features are based on inferred labels on edges between a posting and one or more of its parent or child where these labels are derived automatically from message content {See KNIGHT, C12:L23-28, wherein this reads over "[i]f a user responds with a reply posting to an original posting in a particular subject matter area, the present invention tags the reply posting with a parameter field specifying that the reply posting should also be classified in the same area as the original posting"}.

19. **As per dependent claim 38**, KNIGHT teaches:

The system of claim 37, further comprising means for automatically training the relevance functions from labeled data {See KNIGHT, C20:L31-35, wherein this reads over "the present invention is self-tuning, or auto-configuring, in the sense that it intelligently monitors 'feedback' – interests of its subscribers and uses this information to dynamically build new content of the same nature"}.

20. **Claim 8-9 and 12** are rejected under 35 U.S.C. 103(a) as being unpatentable over KNIGHT, in view of Official Notice.

21. **As per dependent claim 8**, the Examiner takes Official Notice that it would have been obvious to one of ordinary skill in the art that "the relevance functions are probabilities that respective digital artifacts are relevant to a search." That is, one of ordinary skill in the art would readily acknowledge that relevance functions are simply a measure of how closely related the user's query is related to the data source. Since Applicant has failed to traverse the examiner's assertion of official notice, it is noted that the aforementioned common knowledge or well-known in the art statement is taken to be admitted prior art.

22. **As per dependent claim 9**, the Examiner takes Official Notice that it would have been obvious to one of ordinary skill in the art that the "relevance function is defined as Relevance (V(posting, query)), which is a relevance weight of a posting given a query, wherein function (V(posting, query) returns a set of features and feature values for a particular posting and query." That is, since relevance functions are simply a measure of how closely related the user's query is related to the data source, the relevant function would necessarily contain and operate upon the variables of the "posting" and the "query."

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Since Applicant has failed to traverse the examiner's assertion of official notice, it is noted that the aforementioned common knowledge or well-known in the art statement is taken to be admitted prior art.

23. **As per dependent claim 12**, the Examiner takes Official Notice that it would have been obvious to one of ordinary skill in the art that the machine learning includes "a linear regression." That is, one of ordinary skill in the art would readily acknowledge that a linear regression is a commonly used regression method in statistics wherein it provides for a relation of the response to the explanatory variables which is a linear function of some parameters. Since Applicant has failed to traverse the examiner's assertion of official notice, it is noted that the aforementioned common knowledge or well-known in the art statement is taken to be admitted prior art.

Additionally, it is noted that because the remainder of features (i.e. "a non-linear regression, and a support vector machine") listed in the present claim are optionally recited within the claim, they will not be given further consideration nor will prior art be applied for the purposes of this examination.

24. **Claims 10 and 14-16** are rejected under 35 U.S.C. 103(a) as being unpatentable over KNIGHT, in further view of Vanderveldt et al (U.S. Patent No. 6,266,668, hereinafter referred to as Vanderveldt), filed on 4 August 1999, and issued on 24 July 2001.

25. **As per dependent claim 10**, KNIGHT, in combination with VANDERVELDT, discloses:

The system of claim 1, the relevance functions associate relevance weights with respective search results and the ranking of the search results is based on the relevance weight {See Vanderveldt, C4:L43-46, wherein this reads over "allowing reduced weight for synonym and possible misspelling matches"}.

While KNIGHT may fail to expressly disclose the ranking of search results based on relevance weights, VANDERVELDT discloses the use of reduced weights for certain matches. Accordingly, the use of said reduced weights will result in certain matches being ranked lower than others such that lower ranked matches are listed lower in the list. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the inventions suggested by KNIGHT and VANDERVELDT.

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One of ordinary skill in the art would have been motivated to do this modification in order to provide the ranking of search results based on the relevance weights.

26. **As per dependent claim 14**, KNIGHT, in combination with VANDERVELDT, discloses:

The system of claim 1, further comprising a thresholding component that defines one or more acceptable relevance levels in order to mitigate providing non-relevant search results to a user {See Vanderveldt, C4:L54-65, wherein this reads over "[a]fter a maximum number of links have been followed, or the total relevance of pages indexed exceeds a threshold, the search stops and results 0 are returned to the user"}.

While KNIGHT may fail to expressly disclose a thresholding component that defines one or more acceptable relevance levels, VANDERVELDT discloses the use of a threshold in limiting the number of search results returned to a user. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the inventions suggested by KNIGHT and VANDERVELDT.

One of ordinary skill in the art would have been motivated to do this modification in order to limit results to a user-designated threshold.

27. **As per dependent claim 15**, KNIGHT, in combination with VANDERVELDT, discloses:

The system of claim 14, the acceptable relevance levels are configured for at least one of an application and the user {See Vanderveldt, C9:L1-5, wherein this reads over "[d]epending on the profile, the presentation will rate, weigh and organize each search to present the most relevant and related topics of interest"}.

28. **As per dependent claim 16**, KNIGHT, in combination with VANDERVELDT, discloses:

The system of claim 14, the acceptable relevance levels dynamically adjust based on the user's response to search results {See Vanderveldt, C9:L18-21, wherein this reads over "[o]ver time, the profile information database will continue to grow and become more intelligent. Therefore, each subsequent search will become more intelligent and relevant to the previous user"}.

Response to Arguments

29. Applicant's arguments with respect to claims 1-16 have been considered but are moot in view of the new ground(s) of rejection.

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Conclusion

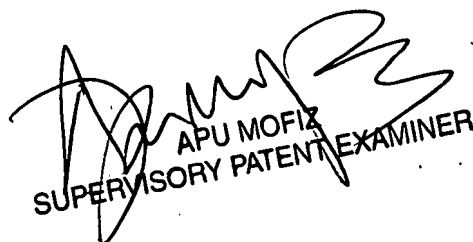
30. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

31. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Kim whose telephone number is (571) 272-2737. The examiner can normally be reached on M-F, 9am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Apu Mofiz can be reached on (571) 272-4080. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


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